

## WEST Search History

DATE: Monday, September 09, 2002

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
L10	L7 and scavenger	13	L10
L9	ozon\$ same scavenger same 'co.sub.2'	4	L9
L8	L7 same water same wafer	8	L8
L7	ozon\$ same 'co.sub.2'	596	L7
L6	L5 and wafer and water	14	L6
L5	ozon\$ same concentration same 'co.sub.2'	68	L5
<i>DB=USPT; PLUR=YES; OP=ADJ</i>			
L4	L1 and water and ((134/\$)!.CCLS.)	29	L4
L3	5261966	15	L3
L2	L1 and wafer and ((134/\$)!.CCLS.)	18	L2
L1	ozone same 'co.sub.2'	511	L1

END OF SEARCH HISTORY

**WEST**

Generate Collection

Print

L9: Entry 2 of 4

File: USPT

Jun 27, 2000

DOCUMENT-IDENTIFIER: US 6080531 A

TITLE: Organic removal process

Detailed Description Text (14):

The bicarbonate ions used in the method may be derived from salts of bicarbonate ions including  $\text{NH}_4\text{HCO}_3$ , salts of carbonate ions, dissolved  $\text{CO}_2$  in solution, or combinations of these bicarbonate ion sources. In practical terms, salts which include metals such as sodium are not acceptable for semiconductor applications, as this could lead to deposition of trace levels of metals on the semiconductor substrate. Thus, ammonia and other non-metallic cations are preferred as the counter-ion when the source of bicarbonate ions is a salt of bicarbonate or carbonate. However, this restriction arises only due to the substrate, so in situations where the presence of trace levels of metals on the substrate is not a concern, the method will work with sources of bicarbonate ions which are salts containing metallic counter-ions. In the case of dissolved  $\text{CO}_2$ , the  $\text{CO}_2$  combines with water to form  $\text{H}_2\text{CO}_3$ .  $\text{H}_2\text{CO}_3$  will dissociate into  $\text{HCO}_3^-$  and  $\text{H}^+$ , and at pH values greater than 7 the equilibrium lies heavily in favor of  $\text{HCO}_3^-$  and  $\text{H}^+$ . The  $\text{CO}_2$  may be introduced into the water by any convenient method, including bubbling  $\text{CO}_2$  gas through the ozonated water. Other substances such as the above mentioned radical scavengers acetone, acetic acid,  $\text{HPO}_4^{2-}$  (hydrogen phosphate ion) and salts thereof,  $\text{H}_3\text{PO}_4$ ,  $\text{NH}_4\text{H}_2\text{PO}_4$ ,  $(\text{NH}_4)_2\text{HPO}_4$ , salts of  $\text{H}_2\text{PO}_4^-$ , salts of  $\text{PO}_4^{3-}$ , alkanes are also contemplated in place of or in addition to the bicarbonate ions.